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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/858,476

05/17/2001

Hiromu Kikawa

H6810.0018/P018

2984

24998

7590

05/11/2004

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EXAMINER

PATEL, HARSHAD R

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 05/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/858,476	<b>Applicant(s)</b> KIKAWA ET AL.	
	<b>Examiner</b> Harshad Patel	<b>Art Unit</b> 2855	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 35-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Objections***

1. Claims 36-39 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 36-39 depend on cancelled claims.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 35 is rejected under 35 U.S.C. 102(e) as being anticipated by Weber (6,336,360).

Weber teaches an air flow measuring device comprising a housing defining a flow passage through which air flows (col. 3, lines 51-52), a sub-passage (20) formed in the housing and having an inlet and an outlet (Fig. 1), the passage having a curved path with an apex point. A flow measuring element (30) located downstream of the apex point in the sub passage.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 36-38 are rejected, as applied to depend under claim 35, under 35 U.S.C. 103(a) as being unpatentable over Weber in view of Zurek et al. (5,355,726) (hereinafter Zurek).

Weber teaches all the specifics of the claimed invention except for the air vent located downstream of the measuring element. Zurek, in the same field of endeavor, teaches the air vent (46) located downstream of the measuring element. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide an air vent upstream or downstream of the measuring element since such an arrangement would reduce air flow through the sub passage during back flow thereby reducing value of signal generated by the sensor during the back flow. It is further noted that the air vent of Zurek is a calibrated aperture, which would inherently be of a dimension that is far below the inlet or outlet opening of the sub passage. It would further assist the dirt particles flowing along with the flowing medium to be removed for the sub passage and aspirated into the main flow line thus preventing the measuring element.

6. Claim 39 is rejected, as applied to depend under claim 35, under 35 U.S.C. 103(a) as being unpatentable over Weber in view of Watanabe et al. (6,571,621) (hereinafter Watanabe).

Weber teaches all the features of the instant invention except for the grooves formed in the outer wall of the sub passage. Watanabe teaches grooves formed in the outer wall of the sub passage. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide grooves to extract the dirt or water particles traveling along with the air and divert them away from the measuring element, thus preventing the sensor from damages.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hecht et al. (6,647,775) teach an aperture upstream of the measuring element for extracting the dirt particles from the flowing medium.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harshad Patel whose telephone number is (571) 272-2187. The examiner can normally be reached on Monday-Thursday (7:00 AM-5:30 PM).

A handwritten signature in black ink, appearing to read 'H. Patel', enclosed within a large, loopy oval shape.

*Harshad Patel*  
*Primary Examiner*  
*Art Unit 2855*

hp  
May 6, 2004